

In the Claims

Please amend the claims as follows:

1. **(Currently Amended)** An isolated polynucleotide molecule encoding a human vitamin D receptor (hVDR) isoform, said polynucleotide molecule comprising

- i) a nucleotide sequence having 95% or more sequence identity to a nucleotide sequence encoding of exon 1d of the human VDR gene, ~~or fragment thereof, or~~
- ~~ii) a nucleotide sequence encoding an amino acid sequence of exon 1d or fragment thereof.~~

2. **(Currently Amended)** A polynucleotide molecule according to claim 1, wherein said nucleotide sequence further includes

- i) a nucleotide sequence having 95% or more sequence identity to a nucleotide sequence ~~of, or~~ encoding an amino acid sequence of, exon 1b ~~or fragment thereof;~~
- ii) a nucleotide sequence having 95% or more sequence identity to a nucleotide sequence ~~of, or~~ encoding an amino acid sequence of, exon 1c ~~or fragment thereof;~~ or
- iii) a nucleotide sequence having i) and ii).

3. **(Currently Amended)** A polynucleotide molecule according to claim 1, wherein the nucleotide sequence includes, from 5' to 3':

- (i) a sequence having 95% or more sequence identity to a nucleotide sequence ~~of, or~~ encoding an amino acid sequence ~~of,~~ of exons 1d, 1c and 2-9 ~~and encodes~~ so as to encode a VDR isoform of approximately 477 amino acids,

- (ii) a sequence having 95% or more sequence identity to a nucleotide sequence ~~of, or~~ encoding an amino acid sequence ~~of,~~ of exons 1d and 2-9 ~~and encodes~~ so as to encode a VDR isoform of approximately 450 amino acids, or

- (iii) a sequence having 95% or more sequence identity to a nucleotide sequence ~~of, or~~ encoding an amino acid sequence ~~of,~~ of exons 1d and 2-9 and further includes a 152bp intronic sequence ~~and encodes~~ so as to encode a truncated VDR isoform of approximately 72 amino acids.

4. **(Currently Amended)** A polynucleotide molecule according to claim 1, wherein the polynucleotide comprises a nucleotide sequence having 95% or more sequence identity to a nucleotide sequence of, or encoding an amino acid sequence encoded by, SEQ ID NO:2, SEQ ID NO:3 or SEQ ID NO:4.

5. – 8. **(Withdrawn)**

9. **(Original)** A plasmid or expression vector including a polynucleotide molecule according to claim 1.

10. **(Original)** A host cell transformed with a polynucleotide molecule according to claim 1 or a plasmid or expression vector according to claim 9.

11. **(Original)** A host cell according to claim 10, wherein the cell is a mammalian cell.

12. **(Original)** A host cell according to claim 10, wherein the cell is a NIH 3T3 or COS 7 cell.

13. **(Currently Amended)** A method of producing a VDR or VDR isoform polypeptide, ~~or a fragment thereof~~, comprising culturing a host cell of claim 10 under conditions enabling the expression of the polynucleotide molecule and, optionally, recovering the VDR or VDR isoform polypeptide .

14. **(Currently Amended)** A method according to claim 13, wherein the VDR or VDR isoform polypeptide, ~~or a fragment thereof~~, is expressed onto the host cell membrane or other sub-cellular compartment.

15. – 20. **(Withdrawn)**

21. **(Currently Amended)** An isolated polynucleotide molecule comprising a nucleotide sequence ~~showing~~ **having** greater than 75% sequence identity to **a polynucleotide encoding MEWRNKKRSDWLSMVLRTAGVE (SEQ ID NO:21).**

GTTTCCTTCTTCTGTCGGGGCGCCTTGGCATGGAGTGGAGGAATAAGAAA
AGGAGCGATTGGCTGTCGATGGTGCTCAGAACTGCTGGAGTGGAGG3' (SEQ ID NO:1).

22. **(Currently Amended)** An isolated polynucleotide molecule comprising a nucleotide sequence ~~showing~~ **having** greater than 85% sequence identity to **a polynucleotide encoding MEWRNKKRSDWLSMVLRTAGVE (SEQ ID NO:21).**

GTTTCCTTCTTCTGTCGGGGCGCCTTGGCATGGAGTGGAGGAATAAGAAA
AGGAGCGATTGGCTGTCGATGGTGCTCAGAACTGCTGGAGTGGAGG3' (SEQ ID NO:1)

23. **(Currently Amended)** An isolated polynucleotide molecule comprising a nucleotide sequence ~~showing~~ **having** greater than 95% sequence identity to **a polynucleotide encoding MEWRNKKRSDWLSMVLRTAGVE (SEQ ID NO:21).**

GTTTCCTTCTTCTGTCGGGGCGCCTTGGCATGGAGTGGAGGAATAAGAAA
AGGAGCGATTGGCTGTCGATGGTGCTCAGAACTGCTGGAGTGGAGG3' (SEQ ID NO:1)

24. **(Allowed)** An isolated polynucleotide molecule comprising a nucleotide sequence of GTTTCCTTCTTCTGTCGGGGCGCCTTGGCATGGAGTGGAGGAATAAGAAA
AGGAGCGATTGGCTGTCGATGGTGCTCAGAACTGCTGGAGTGGAGG3' (SEQ ID NO:1)

25. **(Previously Added)** A plasmid or expression vector including a polynucleotide molecule according to claim 5.

26. **(Currently Amended)** An isolated polynucleotide having a sequence that is complementary to **a nucleotide sequence having 95% or more sequence identity to a nucleotide sequence encoding exon 1d of a human vitamin D receptor** the sequence of the polynucleotide of claim 1 .

27. **(Currently Amended)** An isolated polynucleotide molecule ~~encoding a human vitamin D receptor (hVDR) isoform, said polynucleotide molecule~~ comprising a nucleotide sequence ~~having greater than 75% sequence identity to a nucleotide sequence~~ of nucleotide residues 30-95 of SEQ ID NO:1.

28. **(Currently Amended)** An isolated polynucleotide molecule encoding a human vitamin D receptor (hVDR) isoform, said polynucleotide molecule comprising a nucleotide sequence encoding the amino acid sequence MEWRNKKRSDWLSMVLRTAGVE **(SEQ ID NO:21)**.

29. **(Canceled)**

30. **(New)** A plasmid or expression vector including a polynucleotide molecule according to claim 21, 22, 23, 24, or 28.

31. **(New)** A recombinant host cell containing a polynucleotide molecule according to claim 21, 22, 23, 24, or 28.

32. **(New)** A recombinant host cell containing a plasmid or expression vector according to claim 31.

33. **(New)** A host cell according to claim 32, wherein the cell is a mammalian cell.

34. **(New)** A host cell according to claim 32, wherein the cell is a NIH 3T3 or COS 7 cell.

35. **(New)** A method of producing a VDR or VDR isoform polypeptide-comprising culturing a host cell of claim 32 under conditions enabling the expression of the polynucleotide molecule and, optionally, recovering the VDR or VDR isoform polypeptide .

36. (New) A method according to claim 35, wherein the VDR or VDR isoform polypeptide is expressed onto the host cell membrane or other sub-cellular compartment.